

**Amendment to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (original): A method of treating a vulnerable plaque associated with a blood vessel of a patient, the method comprising:

providing at least one gene therapy agent encoding at least one protein;  
administering the gene therapy agent to a target cell population;  
expressing the protein within the patient from a portion of the target cell population; and  
modifying the vulnerable plaque as a result of the protein expression.

Claim 2 (original): The method of claim 1 wherein the gene therapy agent comprises a polynucleic acid selected from a group consisting of deoxyribonucleic acid and ribonucleic acid.

Claim 3 (original): The method of claim 1 wherein the gene therapy agent comprises a vector selected from a group consisting of a plasmid, retrovirus vectors, adenovirus vectors, Herpes Simplex vectors, Semliki Forest Virus vectors, and Sindbis virus vectors.

Claim 4 (original): The method of claim 1 wherein the gene therapy agent administration comprises at least one technique selected from a group consisting of injection, direct uptake, receptor-mediated uptake, intravenous administration, ingestion, electroporation, and precipitation.

Claim 5 (original): The method of claim 1 wherein the gene therapy agent is administered *in vivo* the patient.

Claim 6 (original): The method of claim 5 wherein the *in vivo* gene therapy is administered with a balloon catheter device.

Claim 7 (original): The method of claim 5 wherein the *in vivo* gene therapy comprises stenting the blood vessel adjacent the vulnerable plaque.

Claim 8 (original): The method of claim 5 wherein the *in vivo* gene therapy is administered interstitially.

Claim 9 (original): The method of claims 1 wherein the gene therapy agent is administered ex vivo the patient.

Claim 10 (original): The method of claim 9 further comprising:  
harvesting the cell population from the patient;  
selecting for the portion of target cells capable of expressing the protein  
subsequent the administration of the gene therapy agent; and  
administering the selected cells into the patient.

Claim 11 (original): The method of claim 10 wherein the selected cells are reintroduced into a pericardial space of the patient.

Claim 12 (original): The method of claim 1 wherein the protein is a collagen isoform.

Claim 13 (original): The method of claim 1 wherein the protein is an A1 apolipoprotein isoform.

Claim 14 (original): The method of claim 13 wherein the A1 apolipoprotein is a mutant Milano isoform.

Claim 15 (original): The method of claim 1 wherein the target cell population comprises cells selected from a group consisting of muscle cells, vascular cells, hepatic cells, harvested patient cells, and donor cells.

Claim 16 (original): The method of claim 1 wherein expressing the protein comprises secreting the protein into a bloodstream.

Claim 17 (original): The method of claim 1 wherein expressing the protein comprises localized expression adjacent the vulnerable plaque.

Claim 18 (original): The method of claim 1 wherein expressing the protein comprises modulating expression level with an expression cassette.

Claim 19 (original): The method of claim 1 wherein modifying the vulnerable plaque comprises a modification selected from a group consisting of fibrous cap reinforcement, reduction of lipid pool size, modifying a lipid pool constitution, modifying an inflammation response, preventing vulnerable plaque formation, and preventing vulnerable plaque enlargement.

Claim 20 (withdrawn): A gene therapy agent for treating a vulnerable plaque associated with a blood vessel of a patient, the gene therapy agent comprising:

at least one polynucleic acid encoding at least one protein wherein administration of the gene therapy agent to a target cell population results in expression of the protein capable of modifying the vulnerable plaque.

Claim 21 (withdrawn): The gene therapy agent of claim 20 wherein the polynucleic acid selected from a group consisting of deoxyribonucleic acid and ribonucleic acid.

Claim 22 (withdrawn): The gene therapy agent of claim 20 wherein the protein is a collagen isoform.

Claim 23 (withdrawn): The gene therapy agent of claim 20 wherein the protein is an A1 isoform of an apolipoprotein.

Claim 24 (withdrawn): The gene therapy agent of claim 23 wherein the A1 apolipoprotein is a mutant Milano isoform.

Claim 25 (withdrawn): The gene therapy agent of claim 20 further comprising a vector operable attached to the polynucleic acid.

Claim 26 (withdrawn): The gene therapy agent of claim 25 wherein the vector is selected from a group consisting of a plasmid, retrovirus vectors, adenovirus vectors, Herpes Simplex vectors, Semliki Forest Virus vectors, and Sindbis virus vectors.

Claim 27 (withdrawn): The gene therapy agent of claim 20 further comprising a liposome sheathing the gene therapy agent.

Claim 28 (withdrawn): The gene therapy agent of claim 20 further comprising an expression cassette encoded in the polynucleic acid.